

# The *Via Militaris* in Arabia

DAVID F. GRAF

In recent years, the forts along the eastern frontier in Arabia (modern Jordan) have been the object of intense archaeological research. Much of the focus has been on the central sector, where a 150 km string of Roman and Byzantine forts extends from Ziza near Amman in the north to Udhruh in the south. Most of these are on a parallel line with the *Via Nova Traiana*, the road some 15–20 km to the west that was constructed under the emperor Trajan between A.D. 111 and 114 as the main initial artery of the province of Arabia.<sup>1</sup> The major forts of this region, including Qasr Bshīr, Lejjūn, Jurf al-Durāwish, and Da‘jāniyeh, have been designated the “outer *limes*”<sup>2</sup> or “central sector” of the *limes Arabicus*<sup>3</sup> and understood as a militarized zone constructed against raids by the Arab tribes from the desert.<sup>4</sup> In actuality, the term *limes* probably refers only to a frontier zone, not a militarized border,<sup>5</sup> and the function of the military camps remains a subject of lively debate.<sup>6</sup>

In this regard, archaeological investigations of the Arabian frontier have particularly neglected the presumed Roman road that linked the forts along the desert fringe of the province. B. Isaac has acutely observed that the road system is the *raison d'être* for the forts, not the reverse: “Mapping and dating forts without considering the road-network is an unstructured procedure which can not lead to an understanding of the system.”<sup>7</sup>

<sup>1</sup>P. Thomsen, “Die römischen Meilensteine der Provinzen Syria, Arabia, und Palästina,” *ZDPV* 40 (1917), 34–57 (nos. 67–175); for more recent work, see D. F. Graf, “The *Via Nova Traiana* in Arabia Petraea,” in *The Roman and Byzantine Near East: Recent Archaeological Research*, ed. J. Humphrey, *Journal of Roman Archaeology*, suppl. 14 (Ann Arbor, 1995), 241–67.

<sup>2</sup>R. E. Brünnow and A. von Domaszewski, *Die Provincia Arabia*, II (Strassburg, 1905), 1–103, for the “äusseren Limes von el-Ma‘ān bis el-Kastal.”

<sup>3</sup>S. T. Parker, *Romans and Saracens: A History of the Arabian Frontier*, American Schools of Oriental Research Dissertation Series 6 (Philadelphia, 1986), 39.

<sup>4</sup>S. T. Parker, “The Nature of Rome’s Arabian Frontier,” in *Roman Frontier Studies, 1989: Proceedings of the XVth International Congress of Roman Frontier Studies*, ed. V. Maxfield and M. J. Dobson (Exeter, 1992), 499.

<sup>5</sup>B. Isaac, “The Meaning of *Limes* and *Limitanei* in Ancient Sources,” *JRS* 78 (1988), 125–47, and P. Mayer-Son, “The Meaning of the Word *Limes* in the Papyri,” *ZPapEpig* 77 (1989), 287–91; but cf. E. L. Wheeler, “Methodological Limits and the Mirage of Roman Strategy,” *Journal of Military History* 57 (1993), 24–30, and C. R. Whittaker, *Frontiers of the Roman Empire* (Baltimore, 1994), 200–202.

<sup>6</sup>D. F. Graf, “Rome and the Saracens: Reassessing the Nomadic Menace,” in *L’Arabie préislamique et son environnement historique et culturel: Travaux du Centre de Recherche sur le Proche-Orient et la Grèce Antiques*, X, ed. T. Fahd (Leiden, 1989), 341–400, and B. Isaac, *The Limits of Empire: The Roman Army in the East*, rev. ed. (Oxford, 1992).

<sup>7</sup>Isaac, *Limits of Empire*, 128.

The existence of this “outer road” between Amman and Udhruh that bypassed the wadi systems to the west is accepted by both Isaac and S. T. Parker,<sup>8</sup> although the milestones associated with it have been found at widely dispersed sites across the 150 km territorial expanse between Amman and Ma‘ān. Because all the milestones are in the environs of forts, it would seem that the road was a *via militaris* used for the movement of troops and linking together the frontier defensive system. One milestone is located just southeast of Lejjūn, almost 100 km south of Amman (Philadelphia); another, 55 km further south near Qal‘at al-Hasā, and a string of others at the approaches to the fort at Jurf al-Durāwīsh (Dschorf ed-Darāwīsch); the rest are near the military camp at Udhruh, more than 50 km south of the others (Fig. 1).<sup>9</sup> The intervening gaps are the main problem for any theory of a consecutive road.

The date and possible function of such a road are also problematic, as all of the milestones known between Ziza and Udhruh are anepigraphic, leaving the termini and chronology for the road a matter of speculation. It is often assumed that such anepigraphic milestones date from the Byzantine era, but this assumption needs to be examined. It is true that epigraphic milestones in Arabia cease after the reign of Julian (A.D. 361–363); they are mainly restricted to the Gerasa-Philadelphia road,<sup>10</sup> with only a few secondary inscriptions of Julian appearing elsewhere.<sup>11</sup> But inscribed milestones of a later period occur in the Jordan Valley and Palestine dating to the reigns of Valentinian I, Valentinian II, and Arcadius.<sup>12</sup> These later finds suggest that the epigraphic manner of inscribing milestones was still practiced in the early Byzantine period, even if this ceased by the fifth century in the Levant.<sup>13</sup> The assumption that the practice of painting milestone texts rather than carving them was a Constantinian practice also needs to be corrected. New discoveries of such milestones from both Arabia and Judea date as early as the reigns of Maximinus Thrax and the Gordians in the early third century A.D.<sup>14</sup> These milestones provide the only evidence of milestones with purely painted texts that I am aware of from the entire empire. It is then possible that the anepigraphic milestones of the purported *via militaris* were treated in similar fashion but that the traces of paint have disappeared.

If such a frontier road existed, it more than likely was an unpaved desert track, not a paved road. Traditional paved Roman roads frequently disappear in areas of difficult terrain, provincial peripheries, and desert frontiers.<sup>15</sup> In fact, all of the roads in North Africa were unpaved beyond the vicinity of the cities,<sup>16</sup> with flagstone pavement existing only for the Carthage-Ammaedaraeven-Theveste road, in spite of more than two thousand milestones that mark unpaved routes.<sup>17</sup> The majority are stone-cleared *viae terrenae*,

<sup>8</sup>B. Isaac, “Bandits in Judaea and Arabia,” *HSCP* 88 (1984), 191 n. 103, and idem, *Limits of Empire*, 228; Parker, *Romans and Saracens*, 126.

<sup>9</sup>Thomsen, “Die römischen Meilensteine,” nos. 172–73, 176–84.

<sup>10</sup>Ibid., nos. 203, 208c–d, 210.

<sup>11</sup>Ibid., nos. 126a–e, 127a–c.

<sup>12</sup>Ibid., nos. 229c, 247, 250, 297b.

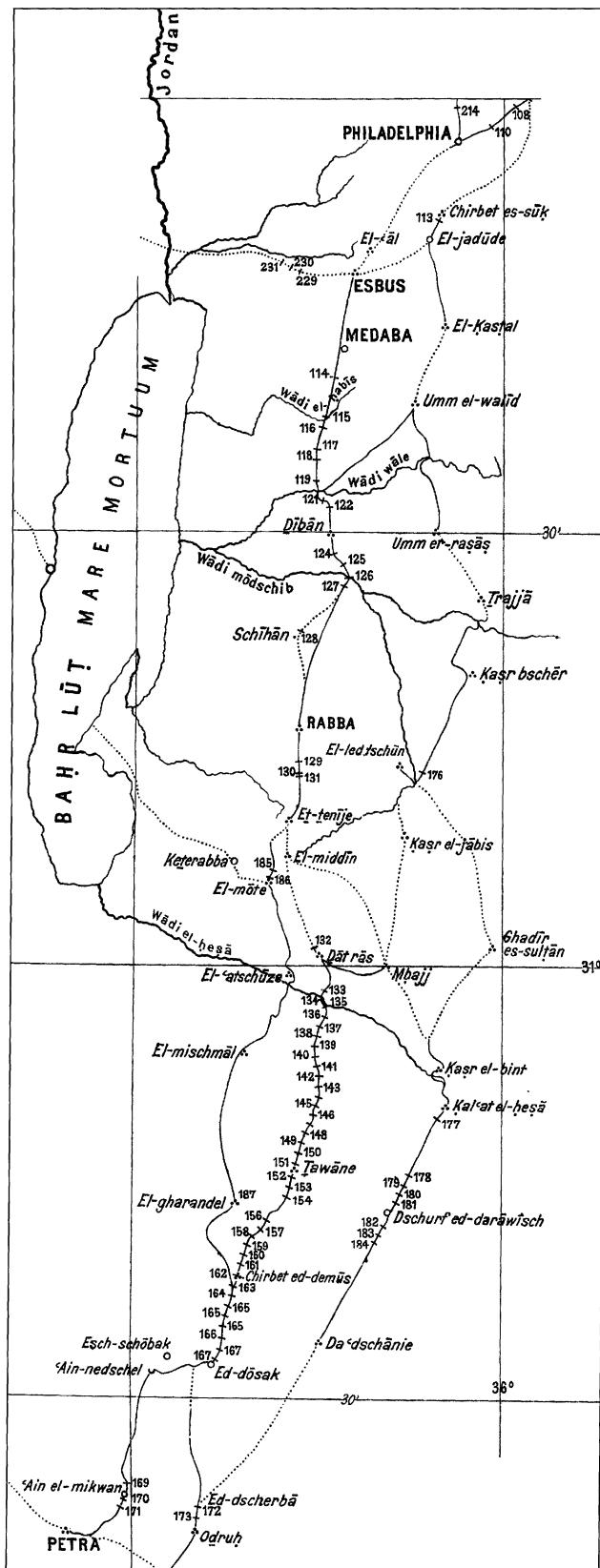
<sup>13</sup>Isaac, *Limits of Empire*, 128.

<sup>14</sup>D. F. Graf, “Milestones with Painted Latin Texts,” *Studies in the History and Archaeology of Jordan* 5 (Amman, 1995), 417–25.

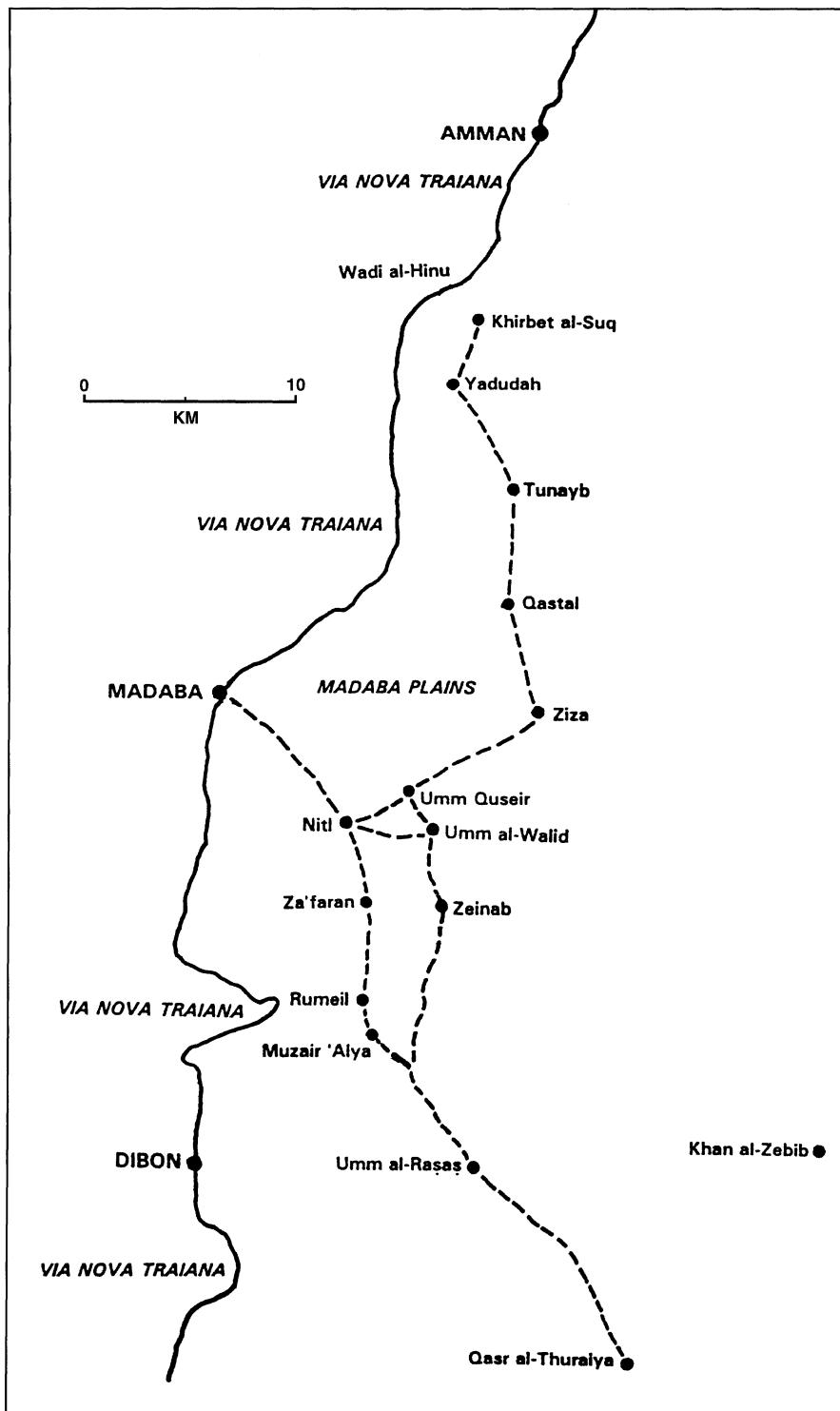
<sup>15</sup>D. L. Kennedy, *Archaeological Explorations on the Roman Frontier in North-East Jordan*, BAR International Series 134 (Oxford, 1982), 138.

<sup>16</sup>D. J. Mattingly, *Tripolitania* (London, 1995), 61.

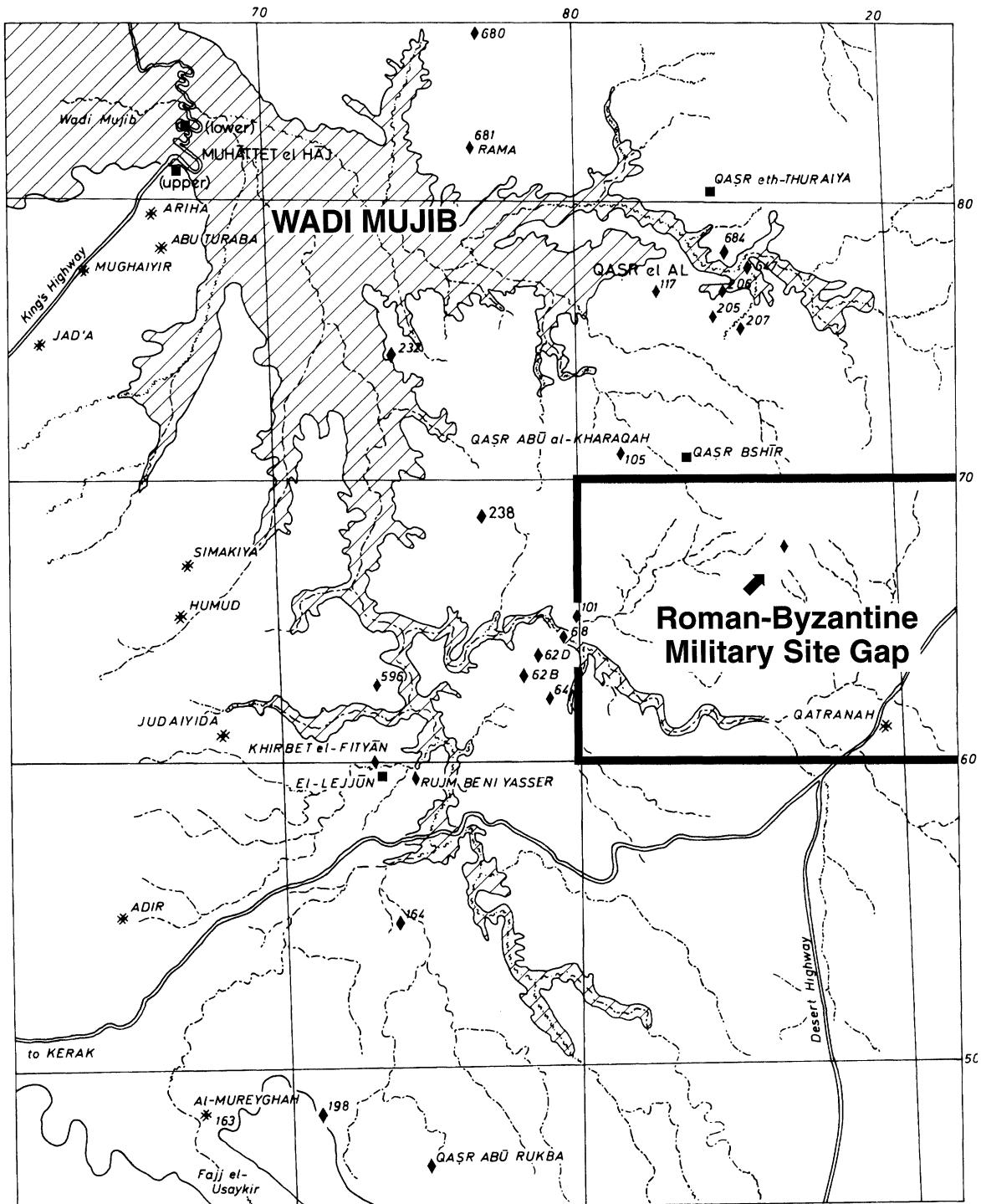
<sup>17</sup>S. Raven, *Rome in Africa*, 3rd ed. (New York-London, 1984), 66–67.



1 Milestone map of Arabia  
(after P. Thomsen, ZDPV 40 [1917])



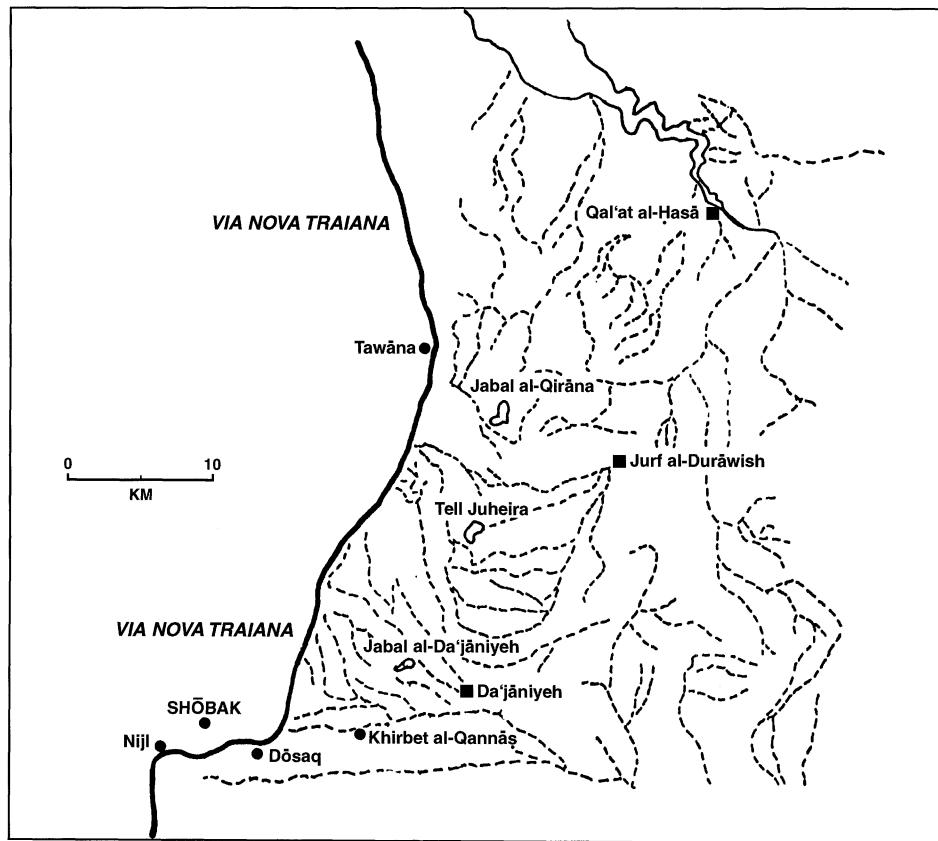
2 Amman to Dibon



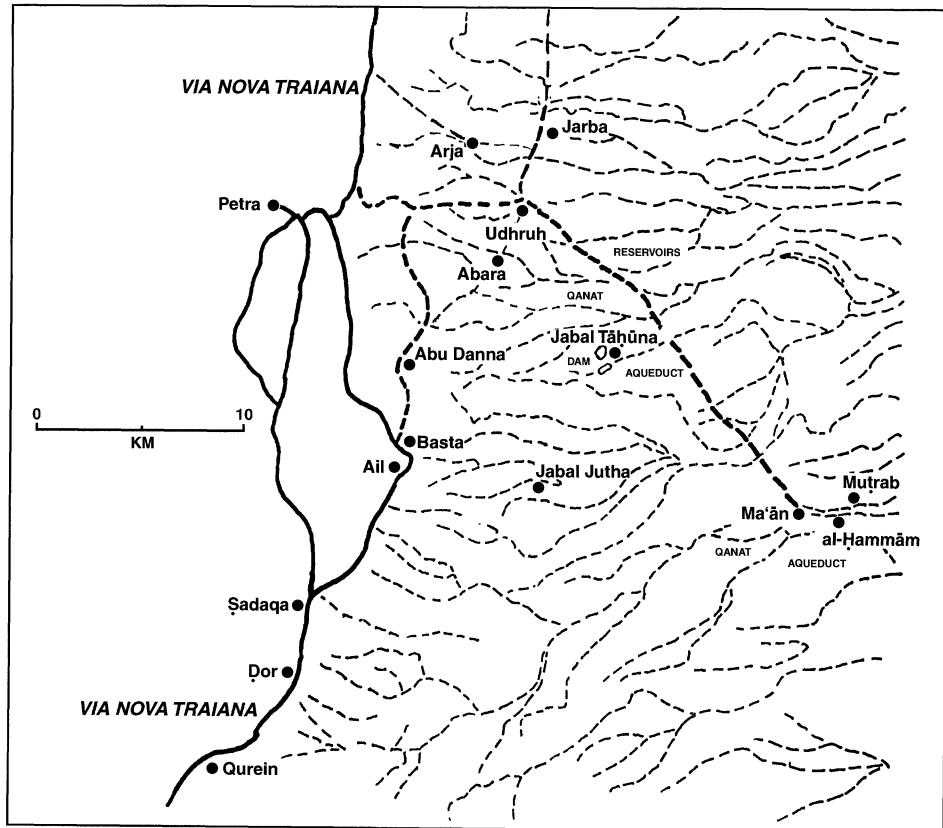
FORT: ■  
WATCH TOWER: ♦  
TOWN: \*

0 1 2 3 4 5 7.5 10 km

3 Kerak region (adapted from S. T. Parker, "The Roman Limes in Jordan," *Studies in the History and Archaeology of Jordan*, III, ed. A. Hadidi [London, 1987], 160)



4 Shōbak region



5 Ma'ān region

consisting of only packed rubble or beaten earth surfaces. In contrast, Egypt is virtually devoid of milestones, although a few were once observed by W. Flinders Petrie between Cairo and the Fayyum.<sup>18</sup> Subsequent finds are from the periphery of the province, the Suez region or Nubia.<sup>19</sup> Between the Nile and the Red Sea in the eastern desert of Egypt, cairns occasionally mark the routes used for trade, but these routes are unpaved and lack milestones.<sup>20</sup> In Nubia the roads are only cleared desert tracks about 10 m wide, with borders constituted by the removed rocks, and occasionally marked by uninscribed sandstone columns.<sup>21</sup> A well-constructed paved road on a desert frontier would have been a rarity.

Even in Arabia, the roads are of diverse construction. The *Via Nova Traiana* between Bostra and Aela on the Red Sea appears to have been paved throughout, as the milestones attest,<sup>22</sup> but it is exceptional in comparison to other roads known in the region. Some paved stretches exist elsewhere, but most are merely vicinal roads, lacking milestones. Other roads in the region are without pavement, for example, the Darb al-Rasif (misnamed “the paved road”) on the edge of the escarpment between Petra and Ras al-Qanā, which joins the Trajanic road just as it descends into the Ḥismā desert on its way to Aqaba.<sup>23</sup> Between Dilagha and Ras al-Qanā on the plateau, the road is merely demarcated by two stone walls some 5 m apart, with nothing but gravel between, that is, a *via glareata* without any milestones; Nabataean and Roman sites at various intervals along its path are alone suggestive of any date. The Roman roads leading from Syria to Azraq are also just *pistes aménagées*, tracks cleared of basalt stone, but accompanied with milestones of mainly Tetrarchic date.<sup>24</sup> They may be compared to the famous Lejja road connecting Bostra and Damascus in Syria, which was constructed under Commodus in the second century A.D., judging from the milestone inscriptions.<sup>25</sup> In essence, milestones can exist without paved roads, and paved roads can exist without milestones, but any outer road on the desert frontier was likely to be unpaved.

The primary evidence for the path of the presumed unpaved *via militaris* then resides in structures associated with the road: forts, *mansiones*, caravanserais, guardposts, and signal stations constitute the connecting links. Most of this evidence is concentrated at difficult wadi crossings and forts, but it has been assumed that other road posts existed in the vast stretches between these points. However, welding the disparate finds into a hypothetical consecutive lengthy road proves difficult. As G. W. Bowersock has observed, simply placing sites of towers, forts, and camps of a presumed *limes Arabicus* on a map represents a “chronological confusion” comparable to that inherent in Père Poidebard’s aerial photography: “Towers, forts, camps and roads of all periods show up all together.” In his opinion, “no continuous road along the edge of the desert is visible either on a composite map of sites or on the ground itself.”<sup>26</sup> Nonetheless, the recent archaeological investigation

<sup>18</sup> Apud O. Hirschfeld, *Die römischen Meilensteine*, SBMünch (1907), 166.

<sup>19</sup> CIL III. 6633 = ILS 657 (Suez); CIL III.14148<sup>2-3</sup> (Nubia).

<sup>20</sup> S. E. Sidebotham, “Ports of the Red Sea and the Arabia-India Trade,” in *Rome and India: The Ancient Sea Trade*, ed. V. Begley and R. De Puma (Madison, Wis., 1991), 25 with fig. 2.13.

<sup>21</sup> J. Hester, P. Hobler, and J. Russell, “New Evidence of Early Roads in Nubia,” *AJA* 74 (1970), 385–89.

<sup>22</sup> Graf, “The *Via Nova Traiana*,” 264.

<sup>23</sup> Ibid., 249–50.

<sup>24</sup> Kennedy, *Archaeological Explorations*, 169, and cf. D. Kennedy and D. Riley, *Rome’s Desert Frontier from the Air* (Austin, Tex., 1990), 81–84.

<sup>25</sup> M. Dunand, “La voie Romaine du Ledgâ,” *MémAcInscr* 13 (1933), 521–57.

<sup>26</sup> G. W. Bowersock, “*Limes Arabicus*,” *HSCP* 80 (1976), 221.

of the Arabian frontier between Amman and Ma‘ān has primarily focused on the forts, ignoring any possible connections with the provincial transportation lattice. A thorough investigation of evidence for a *via militaris* in key areas on the frontier was then a desideratum.

As a result, during 1994–95 a survey of the four main regions associated with the *via militaris* was conducted in cooperation with Fawzi Zayadine of the Department of Antiquities in Jordan. Zbigniew Fiema of the American Center of Oriental Research in Amman and John Pleins of Santa Clara University in California assisted in the effort. Khairieh ‘Amr of the Department of Antiquities served as the ceramicist. The project was supported by grants from Dumbarton Oaks, the American Schools of Oriental Research, and the University of Miami. The results of the investigation may be summarized under four key areas of the central sector of the so-called *limes Arabicus*: the Madaba Plains, the Wadi Mūjib in the Kerak region, the region of Shōbak, and the district of Ma‘ān. Examination of these regions focused on determining the topographical relationship of the forts, investigating the territory between them for structures linking them together, and locating previously reported finds.

### I. THE MADABA PLAINS (Fig. 2)

It has generally been assumed that the *via militaris* began in the north near Amman and proceeded south toward Umm al-Raṣaṣ. In the plains east of Madaba on the desert fringe, there is some fragmentary evidence for a junction with the *Via Nova Traiana*. A milestone found earlier at Khirbet al-Suq, bearing a fragmentary text of Trajanic date (“Im[p(erator) Caesar] . . . Traian[us] . . . piu[s . . . pontifex] maxim[us]”), was originally thought to mark the path of the *Via Nova Traiana* between Madaba and Amman.<sup>27</sup> In support of this hypothesis, we found several other milestones northwest of Khirbet al-Suq; one of them was in the Wadi al-Hinu, and another was just one kilometer further west in Wadi al-Bunayyat.<sup>28</sup> The former lies in the front of a small structure (7 × 5.5 m) of ashlar block that appears to be typical of Roman road posts; the latter is a broken pillar lying in a field approximately one kilometer to the west. The first measured 37–42 cm in diameter and 70 cm in length; the other was 53 cm in diameter and 140 cm in length. Evidently the Trajanic road at this juncture headed directly east before approaching Amman from almost due south. A short paved stretch of road running east-west near Wadi al-Hinu seems to confirm this proposal.<sup>29</sup> But it is precisely at this point that it intersects another demarcated ancient road that heads south to Khirbet al-Suq. The previously reported Trajanic milestone at Khirbet al-Suq, which we were unable to locate, may be associated with this branch road rather than with the *Via Nova Traiana*.

At the junction at Wadi al-Hinu, this branch road probably ran south to Khirbet al-Suq and then through Yadudah and Qastal to Umm al-Walid and Umm al-Raṣaṣ.<sup>30</sup> Several milestones were recently found at Yadudah, 3 km south of Khirbet al-Suq, one sup-

<sup>27</sup>Thomsen, “Die römischen Meilensteine,” no. 113.

<sup>28</sup>R. G. Boling, “Site Survey in the el-‘Umeiri Region,” in *Madaba Plains Project: The 1984 Season at Tell el-‘Umeiri and Vicinity* (Berrien Springs, Mich., 1989), 126–27.

<sup>29</sup>Ibid., 189.

<sup>30</sup>Thomsen, “Die römischen Meilensteine,” 57. The *Tübinger Atlas des Vorderen Orients* (Wiesbaden, 1993), Map B IV 10, “Palästina in spätromisch-byzantinischer Zeit (ca. 300–640 n. Chr.),” lists a milestone just north of Umm al-Walid, but I do not know the basis of this siting.

porting a cave entrance and another lying in a cistern near the Kan Zaman castle.<sup>31</sup> A paved stretch of road running north-south at Yadudah was also observed about one kilometer east, suggesting that a road led south from Khirbet al-Suq through the Roman-Byzantine settlements of Yadudah and Tunayb to the military camps at Qastal and Ziza, but no further evidence could be found for the continuation of this paved segment, which has subsequently disappeared with modern construction in the area. However, two milestones were found in a private residence nearby that were reportedly once adjacent to the road near Khirbet Rufais, one of which is inscribed with the letters "IMP . . . SE . . .," suggesting a date in the reign of Septimius Severus. It appears that this road was headed toward Tunayb and Ziza, after which it may have turned west into the settled region of the plateau. A modern road leading in this direction passes by the Nabataean-Roman tower at Umm Quseir<sup>32</sup> and the Roman fort at Umm al-Walid, on the way to the Byzantine settlement at Nitl, just east of Madaba. From Nitl, another modern road, running south past the Iron Age-Nabataean posts at Qasr Za'farān<sup>33</sup> and Rumeil on the way to Umm al-Raṣaṣ, has been associated with the path of the *via militaris*.<sup>34</sup> Some previously unreported Nabataean and Thamudic graffiti were recorded at Za'farān II, and some Roman-Byzantine sherds that suggest later usage were found at both sites. More significantly, just south of Rumeil, at Muzair 'Alya, there are the remains of an apparent ancient paved road running for one kilometer parallel to the modern road that leads southeast to Umm al-Raṣaṣ. There is also a small ruined tower at Muzair 'Alya, but we failed to locate any sherds in its environs.

In my opinion, these finds probably represent a merely local vicinal ancillary road, not a major fortified road facing east. When plotted on a map, the sites present a jagged route that runs as much east-west as north-south. Nor can any fortification along this 25 km route between Ziza and Umm al-Raṣaṣ be assigned a purely Byzantine date. A well-constructed caravanserai or fort is known at Umm al-Walid (40 m square) several kilometers southeast of Nitl and Umm Quseir, but the pottery from our investigation of the site is overwhelmingly of the second and third centuries A.D., with a gap during the Byzantine era.<sup>35</sup> At Zeinab, about 4 km south of Umm al-Walid, the reverse is the case, with the finds predominantly of the Byzantine era.<sup>36</sup> The late Roman and Byzantine caravanserai at Khan al-Zebib located some 20 km further east is isolated and completely vulnerable to nomadic raids,<sup>37</sup> suggesting that the caravan route along the fringe of the desert did not anticipate any such mounted attacks. In fact, most of the caravanserais known in Palestine and Syria appear to be relatively independent, primarily existing to serve and support caravan traffic along established routes.<sup>38</sup> In sum, the presumed string of struc-

<sup>31</sup> Boling, "Site Survey," 99, 128–30.

<sup>32</sup> N. Glueck, *Explorations in Eastern Palestine*, I, *AASOR* 14 (Philadelphia, 1934), 9–10.

<sup>33</sup> Ibid., 30.

<sup>34</sup> F. Zayadine, "L'espace urbain du grand Pétra, les routes et les stations caravanières," *AAJord* 36 (1992), 229–30.

<sup>35</sup> Cf. Parker, *Romans and Saracens*, 43.

<sup>36</sup> Ibid., 45.

<sup>37</sup> As noted even by Parker, *Romans and Saracens*, 45–48.

<sup>38</sup> J.-M. Dentzer, "Khāns ou casernes à Palmyre? À propos de structures visibles sur les photographies aériennes anciennes," *Syria* 71 (1994), 71–72, 84.

tures between Ziza and Umm al-Raṣaṣ represents too irregular a pattern to be considered a military frontier defensive line, leaving aside the disparate chronology of their occupation and the various possible functions of the structures.

## II. THE KERAK REGION (Fig. 3)

The central sector of the *limes Arabicus* is centered on the Wadi Mūjib, which cuts in an east-west direction across the Transjordanian plateau. The drainage system of this great divide makes it difficult for any continuous north-south route to cross the desert frontier. This may help explain why the distribution of the late Roman and early Byzantine forts and towers of the region extends in a northeastern pattern from the legionary camp at Lejjūn to Qasr al-Thuraiya on the Upper Mūjib; most are concentrated near the banks of the tributaries of the Upper and Lower Wadi Mūjib. In order to pass from Lejjūn to Qasr Bshīr, it is necessary to cross several of these major tributaries of the Wadi Mūjib and one more artery of the drainage system before reaching Qasr al-Thuraiya or Umm al-Raṣaṣ (*Kastron Mefaa*) further north.<sup>39</sup> Such a transportation trajectory could only be seasonal, as the winter and spring rains prevent any easy north-south crossing of the region as far east as Qatranah.<sup>40</sup> Qasr al-Thuraiya is also positioned on the edge of an isolated promontory of the Wadi Mūjib that makes approaching it extremely difficult and time-consuming. This makes any contiguous defensive line from the forts north of the rift and those south of the Wadi Mūjib demanding and impractical. The natural route from Lejjūn is west along the lines of the modern road that passes north by the Roman fort at Khirbet al-Fityān to Simakiya and then westward to Rabba on the *Via Nova Traiana*. Rabba is where Babatha registered her property with a cavalry officer in A.D. 127,<sup>41</sup> and an *equites* unit was still stationed there two centuries later.<sup>42</sup> It remains the administrative center for the region today and must have been vitally linked with the Roman military camp at Lejjūn in antiquity.

Nor is the distribution of the forts suggestive of a defensive system protecting the eastward frontier from nomadic incursions. The late Roman and Byzantine sites discovered in the desert region during the 1982 and 1985 "Limes Arabicus Survey" are primarily along the Wadi al-Siwaqa, a tributary of the Upper Wadi Mūjib to the north, and the Wadi al-Hafirah southeast of Qatranah, areas separated by some 20 km. Even in these regions, evidence of the late Roman–Byzantine era is "conspicuous by its very paucity."<sup>43</sup> In the heart of this region between Qasr Bshīr and Qatranah, there is a 10 km absence of any Roman or Byzantine sites, extending past the present desert highway for at least another 25 km.<sup>44</sup> It is possible that some sites were missed by the earlier survey, as our limited exploration of the region discovered a well-constructed 8 m square structure just

<sup>39</sup> Kennedy and Riley, *Rome's Desert Frontier*, 189–93.

<sup>40</sup> F. L. Kouchy, "Survey of the *Limes Zone*," in *The Roman Frontier in Central Jordan*, BAR International Series 340, ed. S. T. Parker (Oxford, 1987), 74–77 with fig. 33.

<sup>41</sup> N. Lewis, *The Documents from the Bar Kokhba Period in the Cave of Letters: Greek Papyri* (Jerusalem, 1987), no. 16, 36–37.

<sup>42</sup> *Notitia Dignitatum, Oriens* 27.17.

<sup>43</sup> V. Clark, "The Desert Survey," in *The Roman Frontier in Central Jordan*, ed. Parker (as above, note 40), 111.

<sup>44</sup> Clark, "Desert Survey," 108, fig. 34; Parker, "Rome's Arabian Frontier," 502, fig. 99.5; and cf. Kouchy, "Survey," 63 and 67.

11 km northwest of Qatranah, with a number of ribbed Roman body sherds in the environs. It may represent a road post for a route leading from Qasr Bshīr to Qatranah, where a Roman fort probably once existed before the construction of the Ottoman *hajj* station,<sup>45</sup> but the route can only have been of local significance.

This notable gap in the “defensive system” east of the Qatranah-Bshīr line suggests that any nomadic threat from the desert was virtually nonexistent. A region devoid of forts or towers is crucial for any such hypothesis, as the steppeland to the east is precisely the type of land suitable for the grazing of sheep, goats, and camels.<sup>46</sup> The gap provides an open corridor between the fortified points to the west. Although additional sites were discovered in Parker’s subsequent 1987–89 survey of the region with the gap, it failed to alter this picture of the enigmatic lacuna; most of the sites are Bronze Age or earlier, and none is later than the Nabataean era. Furthermore, our efforts failed to produce any additional evidence for a Roman road passing on the outskirts of the desert. Rather than a peg in a *via militaris* artery, the single milestone known for the region may mark only a spur road leading east from Lejjūn to Qatranah.<sup>47</sup> The absence of military structures between the tributaries of the Wadi Mūjib is also matched by a similar gap between Thuraīya and Ziza to the north of the Wadi Mūjib.<sup>48</sup> Nomads could easily pour through such expansive breaches undetected. Clearly, the forts are not arranged in a strategic defensive arrangement for monitoring nomadic movements from the east.

### III. THE SHŌBAK REGION (Fig. 4)

Near the crossing of the Wadi al-Ḥasā at the *hajj* station of Qal’at al-Ḥasā, R. E. Brünnow and A. von Domaszewski discovered what they considered a paved Roman road on their “outer *limes*.<sup>49</sup> The road is actually only 3 km long, restricted to the approaches and crossing of the wadi, and soon disappears over the low-lying hills south of the *hajj* station. Even the milestone reported near the southern terminus has seemingly disappeared.<sup>50</sup> For crossing the wadi, a bridge 30 m long was constructed, with arches similar to those in the adjacent Ottoman station; the cobblestone road varies from 7 to 10 m in width, with periodic drains beneath it to permit water to pass under it to the other side. An inscription on the fort wall associates the construction with Sultan Mustafa II (1757–74). Other Ottoman sources indicate that the bridge and road were constructed even earlier by Aydinli Abdullah Pasha (1730–33) to facilitate pilgrim traffic crossing the muddy plains of the Wadi al-Ḥasā.<sup>51</sup> The only sites reported in the environs are “hamlets,” a camp, and a cemetery of the Ottoman era, without a trace of Roman or Byzantine military structures.<sup>52</sup> Fortified settlements at Er-Ruweihi and Umm Ubtulah further west

<sup>45</sup>A. D. Petersen, “Early Ottoman Forts on the Hajj Route in Jordan” (M.Ph. thesis, Pembroke College, Oxford, 1989), 100–103.

<sup>46</sup>Clark, “Desert Survey,” 112.

<sup>47</sup>Thomsen, “Die römischen Meilensteine,” no. 176.

<sup>48</sup>Parker, *Romans and Saracens*, 38, fig. 12.

<sup>49</sup>Brünnow and von Domaszewski, *Die Provincia Arabia*, II, 16 and fig. 570.

<sup>50</sup>Thomsen, “Die römischen Meilensteine,” no. 177.

<sup>51</sup>Petersen, “Early Ottoman Forts,” 50–63.

<sup>52</sup>B. Macdonald, *The Wadi el Ḥasā Archaeological Survey, 1979–1983, West-Central Jordan* (Waterloo, Ont., 1988), 199, 268 (sites 1063–66).

on the banks of the Wadi al-Hasā are predominantly Nabataean.<sup>53</sup> The “little evidence of Byzantine presence” along the wadi argues against its having served as a “military monitoring zone” in that period.<sup>54</sup> Our exploration of the region confirmed these results. There is nothing at this point of the Wadi al-Hasā to suggest that it was the location of a former Roman-Byzantine road station.

The most substantial evidence for a frontier road appears 15 km further south near Jurf al-Durāwish. A string of milestones on a north-south line were once located on the northern and southern approaches to the late Roman-Byzantine fort at Jurf al-Durāwish.<sup>55</sup> We managed to find only one group of these anepigraphic milestones just 3 km north of the site,<sup>56</sup> but discovered no further traces of the route. Parker considers it a spur road from the Trajanic *Via Nova*,<sup>57</sup> but the direction of the milestones points elsewhere. It is assumed that the links are watchtowers and forts on a north-south line, but the possible connections with Wadi al-Hasā to the north and the fort at Da‘jāniyeh to the southwest are exiguous at best. Watch-posts have been reported on three large basalt mountainous outcrops overlooking the desert to the east, where Roman and Byzantine remains appear: Jabal al-Qirāna, Tell Juheira, and Jabal al-Da‘jāniyeh, all “presumably tied to the *castellum* at Da‘jāniya.”<sup>58</sup> But our investigation suggests that these sites are primarily Iron Age or Nabataean structures, with minimal occupation in the Roman or Byzantine eras. Qirāna is more than 10 km west of Jurf al-Durāwish, and Jabal al-Da‘jāniyeh is 5 km west of the fort at Da‘jāniyeh. The area to the east and between these high points is a deeply eroded wasteland, devoid of settlements and strewn with volcanic rock.

It seems unlikely that any formal route cut directly north across this difficult terrain between Da‘jāniyeh and Jurf al-Durāwish. The arduous topography forces travelers to pass some distance to the east of the rocky high points, far from the settled region, as does the modern desert highway which from north of Ma‘ān runs east of Jurf al-Durāwish to bypass the tortuous terrain to the west. Nonetheless, a caravan route from Petra probably took a circuitous route via Shōbak to join a desert fringe trade route. Just 10 km southwest of Da‘jāniyeh are the ruins of Khirbet al-Qannāṣ, a caravanserai (ca. 85 × 40 m), undoubtedly serving the caravan route that passed by it from Petra on the way north to Amman.<sup>59</sup> From the ceramic and numismatic evidence we gathered in the environs of this previously unreported site, it appears to have flourished in the late Roman and Byzantine eras, simultaneously with the *castellum* at Da‘jāniyeh. As a purely defensive structure, Da‘jāniyeh is too remote to have provided protection for the settlers at Khirbet al-Qannāṣ and must have served some other function.<sup>60</sup> Any need for security seems absent,

<sup>53</sup>Ibid., 210, fig. 55.

<sup>54</sup>Ibid., 292–95; *pace* Parker, *Romans and Saracens*, 89.

<sup>55</sup>Thomsen, “Die römischen Meilensteine,” nos. 177–84.

<sup>56</sup>Ibid., no. 181.

<sup>57</sup>Parker, *Romans and Saracens*, 91.

<sup>58</sup>S. Hart, “Nabataeans and Romans in Southern Jordan,” in *The Defence of the Roman and Byzantine East*, BAR International Series 297, ed. P. Freeman and D. Kennedy (Oxford, 1986), 338–40; cf. Kennedy and Riley, *Rome’s Desert Frontier*, 172–75.

<sup>59</sup>Zayadine, “Pétra,” 229.

<sup>60</sup>Cf. Dentzer, “Khāns,” 76–79.

given the 20 km gap in military posts between Jurf al-Durāwish and Da'jāniyeh and a similar breach in the more than 30 km between Da'jāniyeh and Ma'ān.

#### IV. THE MA'ĀN REGION (Fig. 5)

The evidence for the *via militaris* in this region is limited to two isolated milestones found between Jarba and Udhruh, some 20 km east of Petra.<sup>61</sup> It has been assumed that the impressive remains of the military camp at Udhruh comprised an important station on the *Via Nova Traiana*, which consequently bypassed Petra,<sup>62</sup> but neither literary sources nor archaeological evidence support this hypothesis. The Peutinger Table clearly indicates that the only north-south Transjordanian route passed by Nījl (Shōbak) to Petra, and the archaeological remains support this path for the route.<sup>63</sup> No major Roman or Byzantine settlement exists between Udhruh and Shōbak to suggest it was even an alternative route to the major artery. The milestones near Udhruh probably only marked a branch road leading to Jarba west past the *castellum* at Khirbet Arja to join the Trajanic road.<sup>64</sup> A similar southern route from Udhruh passes by *castella* at Tall Abara and Abu Danna on the way to Basta, where it merged with the *Via Nova*.<sup>65</sup> These three *castella* in the environs of Udhruh are excluded from Parker's survey, leaving the impression that there is an external fortified defensive north-south line between Da'jāniyeh and Ma'ān. In reality, the majority of the forts in this southern region of Jordan are located on the Trajanic road or west of it.<sup>66</sup>

The line of military occupation in the region is actually on a vertical axis proceeding from the cluster of forts near Udhruh southeast to Ma'ān. Between them is the important Roman-Byzantine settlement at Jabal Tāhūna, positioned just west of several sandstone hills, between which a dam was constructed and from which an aqueduct led to a large reservoir in the camp. A possible *castellum* and church were also located among the extensive ruins. Between Udhruh and Tāhūna there are also several large Byzantine reservoirs, adjacent to a large building (55 × 40 m), that suggest the large-scale agricultural development of the region. Roman-Byzantine exploitation of the region continued afterwards, when a *qanat* system was constructed between Udhruh and Tāhūna, probably in the Ottoman period.<sup>67</sup> East of Ma'ān, the well-known Roman and Byzantine military forts at al-Muṭrab and al-Hammām are positioned on the opposite banks of the Wadi Ma'ān, which leads to the plains of Sahl Tuneibulat in the eastern desert.<sup>68</sup> Aqueducts leading

<sup>61</sup> Thomsen, "Die römischen Meilensteine," nos. 172–73.

<sup>62</sup> Glueck, *Explorations*, I, 70–71; followed by Parker, *Romans and Saracens*, 87, and A. Killick, "Udhruh and the Southern Frontier," in *The Defence of the Roman and Byzantine East*, ed. Freeman and Kennedy (as above, note 58), 431–46. For Udhruh, see Kennedy and Riley, *Rome's Desert Frontier*, 131–34.

<sup>63</sup> R. E. Brünnow and A. von Domaszewski, *Die Provincia Arabia*, I (Strassburg, 1904), 100–102; Graf, "The *Via Nova Traiana*," 242–44.

<sup>64</sup> Note the *villa* at Theman, five Roman miles from Petra, where there was a *Romanorum militum praesidium* (Eusebius, *Onomasticon* 97.15–17, ed. E. Klostermann [Leipzig, 1902]).

<sup>65</sup> Kennedy and Riley, *Rome's Desert Frontier*, 107–8, and Killick, "Udhruh," 28–30.

<sup>66</sup> Z. T. Fiema, "Military Architecture and the Defense System of Roman-Byzantine Southern Jordan: A Critical Appraisal of Current Interpretations," *Studies in the History and Archaeology of Jordan* 5 (Amman, 1995), 263–66.

<sup>67</sup> Killick, "Udhruh," 28, and Petersen, "Early Ottoman Forts," 100.

<sup>68</sup> Parker, *Romans and Saracens*, 100–102.

to sizable reservoirs adjacent to the forts illustrate how inhabitants in the Byzantine era capitalized on the limited water resources by extending the cultivated zone eastward into the desert from Udhruh to Ma‘ān.

#### CONCLUSIONS

Analysis of these four important zones of the Arabian frontier reveals the problems inherent in constructing a hypothetical *via militaris* between Ziza and Udhruh. The widely separated milestones in the proximity of Lejjūn and Jurf al-Durāwish perhaps only marked the approaches to the military camps for travelers. The single milestone found near the Ottoman fort at Qal’at al-Hasā may be simply a later reuse of a milestone from elsewhere. In any case, the finds are insufficient for postulating a continuous road between these distant points. Even the famed *Strata Diocletiana*, presumed to be a continuous north-south road across the desert steppe from the Euphrates in Syria to Azraq in Arabia, may represent only a complex of roads in Syria, not a single route.<sup>69</sup> If the Tetrarchic military buildup is a “phantom,”<sup>70</sup> the *limes Arabicus* interpreted as a defensive system operating against nomadic incursions seems equally imaginary. Sizable gaps of 10–35 km exist between identifiable military structures all along its flanks. Many of the forts and watchtowers are clustered around the edges of the wadi banks that penetrate the desert frontier. It is not likely that such locations were designed for any particular defensive function. Other possibilities need to be considered, including economic and commercial purposes. In many cases, the cultivated zone itself extends eastward into the desert along the wadi formations with the military structures, leaving the clear impression that the forts are associated with the enterprise, if not the instigators, of this thrust outward.

If the early Roman imperial period witnessed the military occupation of the cities and towns in the eastern provinces,<sup>71</sup> there is a noticeable shift eastward with Diocletian and his successors. As the examination of a possible *via militaris* illustrates, it is in the early Byzantine period that many of the forts came into existence. Many of the forts bear names derived from purely military terminology, suggesting that they were established in previously undeveloped territory: Qastal, Lejjūn, and Qatranah reflect Latin *castellum*, *legio*, and *castra*. This shift of garrisons from the civilian settlements and cultivated zone into the desert periphery in the late empire is not restricted to Arabia.<sup>72</sup> The change may reflect the general imperial concern for developing the agricultural potential of marginal lands by creating estates in border regions.<sup>73</sup> Some of the forts on the Arabian frontier may represent similar enterprises, extending the agricultural and pastoral potential of the region. Along the main highway connecting Greece and Syria, imperial stables were located in Thrace, Phrygia, and Cappadocia to breed animals for the *cursus publicus*.<sup>74</sup>

<sup>69</sup>T. Bauzou, “Épigraphie et toponymie: Le cas de la Palmyrène du sud-ouest,” *Syria* 70 (1993), 27–36.

<sup>70</sup>Fiema, “Defense System,” 267.

<sup>71</sup>Isaac, *Limits of Empire*, 101–60.

<sup>72</sup>R. MacMullen, *Soldier and Civilian in the Later Roman Empire* (Cambridge, 1967), 121–23.

<sup>73</sup>D. J. Crawford, “Imperial Estates,” in *Studies in Roman Property*, ed. M. I. Finley (Cambridge, 1976), 54; D. Kehoe, *The Economics of Agriculture on Roman Imperial Estates in North Africa*, Hypomnemata 89 (Göttingen, 1988), 200–221; R. Delmaire, *Largesses sacrées et Res privata: L'Aerarium impérial et son administration du IVe au VIe siècle*, Collection de l’École française de Rome 121 (Rome, 1989), 679–82.

<sup>74</sup>Delmaire, *Largesses sacrées*, 682.

Some of the forts in the outlying areas in Arabia may have been responsible for providing animals to the *stationarii* and the cavalry units located in the region.<sup>75</sup> The region of Yadudah south of Amman is the traditional horse-breeding region of Jordan, not far from the Roman forts at Qastal and Ziza. The forts on the edge of the wadis could be producing the required grain and water to supply the troops and their animals. Any caravans crossing the desert fringe would also have required such way stations for resources and supplies. The *prata* or *territorium* of the legionary and auxiliary units normally functioned in this way, but in this marginal zone the development of these vital areas was even more essential.

Other fortified points may have protected imperial estates. With regard to the Negev of Palestine, Byzantine sources frequently refer to Saltus Geraiticus and Saltus Constantianus on the *limes Palestinae* southeast of Gaza where the *equites Thamudeni Illyricani* and *equites promoti Illyricani* were stationed respectively.<sup>76</sup> For southern Jordan, Byzantine geographers list a *Salton Hieratikon* in the metropolis of Petra.<sup>77</sup> Its location in the forest districts at Khirbet al-Megdes, 11 km south of Shōbak, is merely a guess,<sup>78</sup> but it may be a sacred area in the immediate vicinity of Petra once associated with the royal dynasty of Nabataea before being acquired by Rome. It is known that Constantine confiscated many of the temple estates, which were later briefly restored by Julian before finally being confiscated by Valentinian and Valens.<sup>79</sup> As late as A.D. 385, Areopolis and Petra were vigorously defending their temples against attacks by Cynegius, the praetorian prefect of the East, but must have succumbed eventually to such pressures.<sup>80</sup> It is possible that some of the forts in the Udhruh region may have been associated with such estates. Of course, no single interpretation can suffice to explain the location and function of all the forts in the frontier zone, but the hypothesis that they served a military purpose, to ward off all nomadic raids, apparently lacks the element of a synchronized road system necessary for it to gain any credibility.

University of Miami

<sup>75</sup>R. W. Davies, "The Supply of Animals to the Roman Army and the Remount System," in *Service in the Roman Army*, ed. D. Breeze and V. Maxfield (New York, 1989), 167–71.

<sup>76</sup>*Notitia Dignitatum*, *Oriens* 34.19 and 22, with Y. Tsafrir et al., *Tabula Imperii Romani: Iudea-Palaestina* (Jerusalem, 1994), 132–33, 183, s.v. "Menois" with 220.

<sup>77</sup>George of Cyprus, *Descriptio orbis Romani* 1057, ed. H. Gelzer (Leipzig, 1890).

<sup>78</sup>E. Honigmann, *Le Synekèdemos d'Hérokles et Georges de Chypre*, CBHByz, Forma Imperii Byzantini 1 (Brussels, 1939), 43–44.

<sup>79</sup>Libanius, *Orationes* 30.6, 37; *ibid.*, 62.8; *CTh* 5.13.13, 10.1.8; cf. 16.10.

<sup>80</sup>A. H. M. Jones, *The Later Roman Empire, 284–602* (Baltimore, 1964), 167, and G. Fowden, "Bishops and Temples in the Eastern Roman Empire, A.D. 320–435," *JTS* 29 (1978), 64–76.